

**A HEAD OF LINE BLOCKAGE AVOIDANCE SYSTEM AND  
METHOD OF OPERATION THEREOF**

**ABSTRACT OF THE DISCLOSURE**

A head of line blockage avoidance system for use with network systems that employ packets having an associated priority and a method of operation thereof. In one embodiment, the head of line blockage avoidance system includes: (1)  $m$  inputs,  $m$  numbering at least two, configured to receive the packets, (2)  $n$  packet first-in-first-out buffers (FIFOs),  $n$  numbering at least three, each of the packet FIFOs configured to receive at least one of the packets from the  $m$  inputs, (3) a priority summarizer configured to generate a priority summary of the packets within the  $m$  inputs and the  $n$  packet FIFOs, and (4) a scheduler configured to cause one of the  $n$  packet FIFOs to be queued for processing based on the priority summary.